

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
26 May 2005 (26.05.2005)

PCT

(10) International Publication Number:
WO 2005/047292 A1

(51) International Patent Classification⁷: C07D 495/04, (74) Common Representative MERCK PATENT GMBH;
A61K 31/505, A61P 35/00 Frankfurter Strasse 250, 64293 Darmstadt (DE).

(21) International Application Number: PCT/EP2004/011551 (81) Designated states (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 14 October 2004 (14.10.2004)

(25) Filing Language: German

(26) Publication Language: German

(30) Priority Data: 103 51 436.8 4 November 2003 (04.11.2003) DE

(71) Applicant (for all designated States except US): MERCK PATENT GMBH [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): EGGENWEILER, Hans-Michael [DE/DE]; Kafkastrasse 4, 64291 Darmstadt (DE). JONCZYK, Alfred [DE/DE]; Schepp Allee 57, 64295 Darmstadt (DE). BARNICKEL, Gerhard [DE/DE]; Emilstrasse 27, 64293 Darmstadt (DE). RAUTENBERG, Wilfried [DE/DE]; Magdeburger Strasse 13, 64354 Reinheim (DE). DROSDAT, Helga [DE/DE]; Im Vordersberg 12, 64646 Heppenheim (DE). SUTTER, Arne [DE/DE]; Prinzenbergweg 3, 64367 Mühlthal (DE).

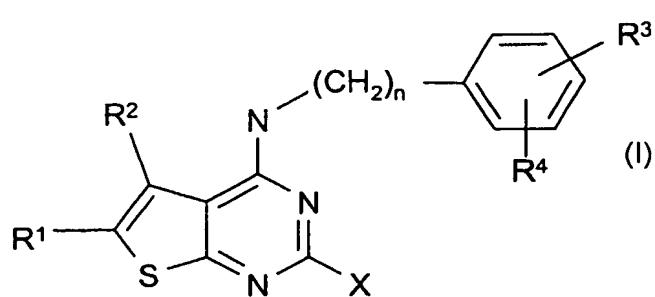
(84) Designated states (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: USE OF THIENOPYRIMIDINES



(57) Abstract: Compounds of the formula (I) in which R¹, R², R³, R⁴, X and n have the meanings indicated in Claim (1), are inhibitors of tyrosine kinases, in particular TIE-2, and Raf kinases and can be employed, inter alia, for the treatment of tumours.